

1/6/20

Graphing Inequalities

can solve an inequality and graph the solution on a number line.

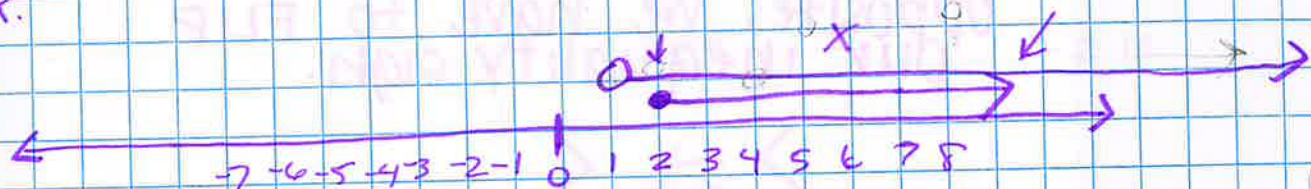
$\circ \rightarrow$ empty circle means $>$ or $<$

$\bullet \rightarrow$ filled in means \geq or \leq

\downarrow
greater than or =

\downarrow
less than or equal

ex:

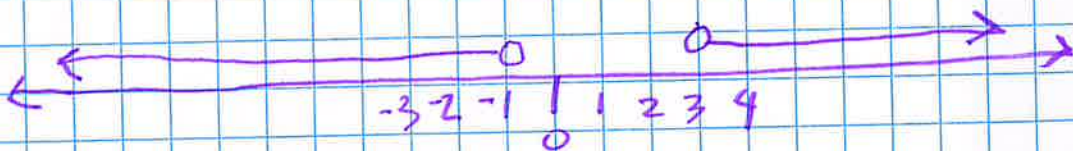


$$x \geq 2$$

ex

$x > 1$
every number greater than 1

ex



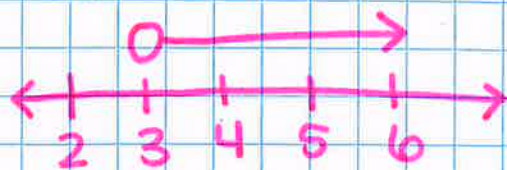
$$x < -1$$

\uparrow
starting point

ex:

~~$x > 3$~~
 $x > 3$

$$\begin{array}{r}
 5x - 13 > 2 \\
 +13 \quad +13 \\
 \hline
 5x > 15 \\
 \frac{5x}{5} > \frac{15}{5} \\
 x > 3
 \end{array}$$



$$\begin{array}{r}
 -11 + 3x \leq -5 \\
 +11 \quad +11 \\
 \hline
 3x \leq 6 \\
 \frac{3x}{3} \leq \frac{6}{3} \\
 x \leq 2
 \end{array}$$

